AMENDMENTS TO THE CLAIMS

Claims 1-40, 44, 49 and 56-62 were cancelled previously. Claims 41-42 and 55 have been cancelled herein without prejudice to their subsequent reintroduction into this application or their introduction into a related application. Claims 43, 45, 46, 48, 50, 51 and 54 have been amended. New claims 63-71 have been added.

1-42. (Cancelled)

43. (Currently amended) A method of diagnosing breast cancer in a mammal, the method comprising the steps of:

(a) obtaining a sample isolated from the mammal; and

(b) detecting in the sample the presence or absence of a protein characterized as comprising an amino acid sequence selected from the group consisting of SEQ ID NO: 1; SEQ ID NO: 2; SEQ ID NO: 3; SEQ ID NO: 4; and SEQ ID NO: 5~~; SEQ ID NO:6; SEQ ID NO:7; SEQ ID NO:8; SEQ ID NO:9; SEQ ID NO:10; SEQ ID NO:11; SEQ ID NO:12; SEQ ID NO:13; SEQ ID NO:14; SEQ ID NO:15; SEQ ID NO:16; SEQ ID NO:17; SEQ ID NO:18; SEQ ID NO:19; SEQ ID NO:20; SEQ ID NO:21, SEQ ID NO:22; and SEQ ID NO:23, which if present is indicative of breast cancer in the mammal~~, wherein the presence of the protein is indicative of the presence of breast cancer in the mammal, and wherein the absence of the protein is indicative of the absence of breast cancer in the mammal.

44. (Cancelled)

45. (Currently amended) The method of claim 43 or 70, wherein the sample comprises breast tissue.

46. (Currently amended) The method of claim 43 or 70, wherein the sample comprises a body fluid.

47. (Original) The method of claim 46, wherein the body fluid is selected from the group consisting of blood, serum, plasma, sweat, tears, urine, peritoneal fluid, lymph, vaginal secretions, semen, spinal fluid, ascitic fluid, saliva, sputum, and breast exudate.

48. (Currently amended) A method of diagnosing breast cancer in a mammal, the method comprising the steps of:

(a) contacting a sample derived from the mammal with a binding moiety that binds specifically to a protein comprising an amino acid sequence ~~selected from the group consisting~~ of ~~SEQ ID NO: 1,~~ SEQ ID NO: 5~~, SEQ ID NO:22, and SEQ ID NO:23~~, thereby to produce a complex; and

(b) detecting the presence or absence of a complex, wherein the presence of the complex is indicative of the presence of breast cancer in the mammal, and wherein the absence of the complex is indicative of the absence of breast cancer in the mammal.

49. (Cancelled)

50. (Currently amended) The method of claim 48 or 71, wherein the binding moiety is selected from the group consisting of an antibody, an antibody fragment and a biosynthetic antibody binding site.

51. (Currently amended) The method of claim 48 or 71, wherein the binding moiety is an antibody.

52. (Original) The method of claim 51, wherein the antibody is a monoclonal antibody.

53. (Original) The method of claim 50, wherein the binding moiety is labeled with a detectable moiety.

54. (Currently amended) The method of claim 48, wherein the absence of a detectable amount of the ~~protein~~ complex is indicative of the absence of breast cancer.

55-62. (Cancelled)

63. (New) The method of claim 46, wherein the body fluid is serum.

64. (New) The method of claim 48 or 71, wherein the sample comprises breast tissue.

65. (New) The method of claim 48 or 71, wherein the sample comprises a body fluid.

66. (New) The method of claim 65, wherein the body fluid is selected from the group consisting of blood, serum, plasma, sweat, tears, urine, peritoneal fluid, lymph, vaginal secretions, semen, spinal fluid, ascitic fluid, saliva, sputum, and breast exudate.

67. (New) The method of claim 65, wherein the body fluid is serum.

68. (New) The method of claim 43, wherein the presence of a detectable amount of the protein is indicative of the presence of breast cancer in the mammal.

69. (New) The method of claim 43, wherein the absence of a detectable amount of the protein is indicative of the absence of breast cancer in the mammal.

70. (New) A method of diagnosing breast cancer in a mammal, the method comprising the step of:

determining whether a protein comprising an amino acid sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, and SEQ ID NO:5 is present in a sample derived from the mammal in an amount greater than or equal to a threshold value indicative of the presence of breast cancer in the mammal,

wherein an amount of protein greater than or equal to the threshold value is indicative of the presence of breast cancer in the mammal and an amount of protein less than the threshold value is indicative of the absence of breast cancer in the mammal.

71. (New) A method of diagnosing breast cancer in a mammal, the method comprising the steps of:

(a) contacting a sample from the mammal derived from the mammal with a binding moiety that binds specifically to a protein comprising an amino acid sequence of SEQ ID NO:5, thereby to produce a complex; and

(b) determining whether the complex is present in an amount greater than or equal to a threshold value indicative of the presence of breast cancer in the mammal,

wherein an amount greater than or equal to the threshold value is indicative of the presence of breast cancer in the mammal and an amount less than the threshold value is indicative of the absence of breast cancer in the mammal.